## WHAT IS "BACKFLOW" AND WHY DOES IT HAPPEN?

Under certain conditions, stoppages in the sanitary sewer in your neighborhood could cause sewage wastewater to "back up" into your home, a condition called **backflow.**

When there is a stoppage in the sewer main in the street, the sewer system upstream of the stoppage becomes flooded. The water level in the sewer will continue to rise until it reaches an overflow point, which usually is the **sewer manhole** above the stoppage. But in certain situations, the overflow point could be the **flood rim level** (the point where the fixture cannot hold any more water) of plumbing fixtures in your home. This could occur if the fixture flood rim level is lower in elevation than the next upstream manhole.

## HOW CAN I TELL IF MY PROPERTY IS AT RISK?

A visual comparison of the manhole elevation to the flood level elevation of the **lowest plumbing fixture** (usually a shower, bathtub or toilet) in your home will indicate the potential for spillage of wastewater into your home. The use of a **builder's level** optical instrument can help determine the relative elevations to see if your home requires backwater valve protection. A licensed plumbing contractor can determine these elevations.

The location of plumbing fixtures in a basement does not automatically trigger the need for backwater valves. In many instances, fixtures in a basement are pumped vertically to a building drain above, and the pump outlet is already provided with a check valve that protects against backflow. If the basement fixtures drain by gravity and aren't pumped out, backflow protection may be required.

## HOW DO I PROTECT MY PROPERTY AGAINST BACKFLOW?

If your home is located on a slope, or your home is lower than the other homes on your street, you may be subject to backflow. If it is, a device called a **backwater valve** should be installed in your **building drain.** This device contains a flapper that opens with the normal flow of waste away from your home, but swings shut to prevent backflow when the direction of flow is reversed. Some of the newer subdivisions in San Jose have had additional overflow points, called **flushing inlets,** installed in the street between manholes to lessen the chance that a sewer stoppage could cause damage to your home.

Backwater valves should be located in a vault, similar to the box enclosing your water meter. Backwater valves are usually located in front of the house, where the sewer drain exits the building. If you believe your home is subject to backflow, you should try to locate the backwater valve. If your home is equipped with a backwater valve, it should be easily located. These valves have moving parts, and require periodic inspection and maintenance. It is the homeowner's responsibility to do the necessary maintenance.

## WHAT SHOULD I DO IF I NEED A BACKWATER VALVE?

If you think your home needs backwater valve protection, and you cannot locate a backwater valve in your building drain, you should contact a licensed plumbing company. They can provide the expertise to determine if a backwater valve is necessary by checking elevations and determining if your neighborhood has flushing inlets.. They can also do the installation if you don't feel capable of doing it yourself. Remember that a plumbing permit is **required** for the installation of backwater valves, and **inspections** of the installations are required as well. Also, be aware that a backwater valve shall **not** be installed if backflow protection isn't necessary.

Please review the accompanying diagrams for clarification of the need for and use of backwater valves. If you have questions, call the City of San Jose Building Division at (408) 277-2470.